

ABSTRACT

A method and apparatus are provided for controlling the quantization level in a digital video encoder that comprises a plurality of parallel compression engines (12). The input picture is partitioned into a number of panels (10) and each panel is processed by a distinct compression engine (12). A reference quantizer scale is determined before encoding a frame of video. The reference quantizer scale is used at the first slice of every video image panel being processed by the video encoder. The quantizer scale at the last slice of the image panel is then forced to be the same as the first slice. The forcing step can use a piecewise-linear feedback formula. A group of pictures (GOP) target bit rate is adjusted based on the number of film pictures and non-film pictures currently in the processing pipeline of at least one of the compression engines. A higher target bit rate is provided for non-film pictures. A buffer (16) level of the video encoder is used to control the start of a new group of pictures (GOP). The start of a new GOP is delayed if the buffer (16) does not have sufficient space to accommodate an intra-coded (I) frame for the new GOP.